

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

SCENTSATIONAL TECHNOLOGIES, LLC,

*Plaintiff,*

v.

PEPSICO INC., PEPSI-COLA TECHNICAL  
OPERATIONS, INC., THE QUAKER OATS  
COMPANY, STOKELY-VAN CAMP, INC.,  
and TROPICANA PRODUCTS, INC.,

*Defendants.*

Civil Action No. 13-CV-8645-KMK

**FILED UNDER SEAL**

**SCENTSATIONAL TECHNOLOGIES, LLC'S  
RESPONSE TO DEFENDANTS' RULE 56.1 STATEMENT**

## **I. HISTORY OF AROMA RELEASE PACKAGING**

**PepsiCo 1.** This case is about technology relating to the release of aroma (i.e., small molecular weight volatile compounds that emit a smell or odor) from food and beverage packaging. See, e.g., Ex. 1 (Amended Complaint ¶ 20).

**ST Response 1.** Denied. This case is about how PepsiCo and its Research and Development (R&D) employees misappropriated ST's compilation trade secrets for adding aroma to product packaging and breached PepsiCo's four confidentiality agreements with ST. (ST's Memorandum of Law in Support of its Opposition to Defendants' Motion for Summary Judgment ("ST Mem.") at 1-2).

**PepsiCo 2.** More specifically, this technology focuses on the use of aroma in food and beverage packaging to enhance the consumer experience especially with respect to improving and/or modifying consumer perceptions of oral taste. See, e.g., Ex. 1 (¶ 24).

**ST Response 2.** Admitted.

**PepsiCo 3.** Commercial and academic entities have been researching and developing aroma release packaging for potentially enhancing the consumer experience for over 40 years. See, e.g., Ex. 2 (Hotchkiss Report ¶¶ 40-61); Ex. 3 (PEP0097162-164).

**ST Response 3.** Admitted in part and denied in part. ST admits that many commercial entities and academics have researched the application of aroma to food and beverage packaging, including PepsiCo. ST denies the implication that this research was successful in discovering commercially feasible methods, systems, and formulas for aromatic packaging. (Declaration and Rebuttal Report of Dr. Keith R. Cadwallader ("Cadwallader Decl.") at pg. 4-14 and Exhibit IV thereto). Even Dr. Hotchkiss, Pepsi's expert, stated in a 2002

interview that that the technology “only gained any popularity in the last three or four years.”  
(Exhibit 280)

**PepsiCo 4.** Similarly, sensory research regarding aroma-taste interactions has been ongoing since at least as early as 1988. *See, e.g.*, Ex. 2 (¶¶ 40-43); Ex. 4 (PEP0096720-738).

**ST Response 4.** Admitted in part and denied in part. ST admits that many commercial entities and academics have performed research into aroma-taste interactions since 1988. ST denies that any of this research revealed the commercially feasible methods, systems, and formulas for aromatic packaging contained in ST’s trade secrets. (Cadwallader Decl. at pg. 4-14 and Exhibit IV thereto). Even Dr. Hotchkiss, Pepsi’s expert, stated in a 2002 interview that that the technology “only gained any popularity in the last three or four years.” (Exhibit 280)

**PepsiCo 5.** For example, food and beverage, packaging, and flavor companies like General Foods, International Paper, Nestle, Kraft, and IFF have pursued research and development in various aroma release packaging technologies for applications like instant coffee, orange juice, and frozen foods. *See, e.g.*, Ex. 2 (¶¶ 46-47, 50, 53); Ex. 3; Ex. 5 (PEP0097211-216); Ex. 6 (IP0001-214 at 001-07, 126-27); Ex. 7 (PEP0097310-315); Ex. 8 (PEP0097339-346); Ex. 9 (PEP0095835-849 at 846); Ex. 10 (IFF04).

**ST Response 5.** Admitted in part and denied in part. ST admits that General Foods, International Paper, Nestle, Kraft, and IFF have performed research into aroma-taste interactions. ST denies that any of these companies ever successfully commercialized aromatic packaging products, whereas ST has successfully commercialized aromatic packaging products and has been engaged by these companies to demonstrate their methods, systems, and formulas for aromatic packaging under confidentiality agreements. (Declaration of Steven Landau (“Landau

Decl.”) at pages 1-2; Ex. 64, Edelstein Tr. 1/5/2016 at 216-219; Ex. 141, Landau Tr. Vol 4 7/29/2015 at 1181, 1136; Ex. 67, Landau Tr. 12/18/15 at 268-9 and Ex. 87 thereto)

**PepsiCo 6.** Likewise, researchers from academic institutions like the University of Cincinnati and University of California, Davis have shown that taste (*e.g.*, sweet taste) can be enhanced in the presence of various aromas (*e.g.*, vanilla, coffee, lemon). *See, e.g.*, Ex. 2 (¶ 43); Ex. 4 (at 724).

**ST Response 6.** Admitted in part and denied in part. ST admits that academics at various universities, including Cornell University where PepsiCo’s expert Dr. Hotchkiss teaches, have -- at various times and in various ways -- demonstrated that taste can be enhanced in the presence of aromas. ST denies that these academics, including Cornell’s Dr. Hotchkiss, ever successfully demonstrated commercially feasible methods, systems, and formulas for aromatic packaging. (Cadwallader Decl. at pg. 4-14 and Exhibit IV thereto). ST affirmatively alleges that ST was the first to identify and describe commercially feasible methods, systems and formulas for enhancing sweet taste through the application of aromas in and on packaging, [REDACTED] and that ST maintained its methods, systems and formulas for enhancing sweet taste through the application of aromas in and on packaging as trade secrets and never publically disclosed them. (Cadwallader Decl. at pg. 4-14 and Exhibit IV thereto). ST affirmatively alleges that at no time prior to the publication of the ‘245 Application on March 4, 2010 had any academics or commercial entities ever publically disclosed methods, systems or formulas for enhancing sweet taste through the application of aromas in and on packaging. (Cadwallader Decl. at pg. 4-14 and Exhibit IV thereto).

**PepsiCo 7.** Unsurprisingly, these commercial and academic entities have contributed substantial knowledge and information to the public domain regarding aroma release packaging in the form of patents, technical/trade literature, and industry product guides; in 1991, for example, International Paper patented a system for releasing aroma from paper or plastic packaging (e.g., orange juice container) to increase consumer appeal. See Ex. 5 (at 213, 215); Ex. 6 (at 001-07).

**ST Response 7.** Admitted in part and denied in part. ST admits that academics at various universities have contributed knowledge in efforts to create aroma release packaging, including in the form of patent applications. ST denies that any such research or patents ever disclosed commercially feasible methods, systems, and formulas for producing aromatic packaging. (Cadwallader Decl. at pg. 4-14 and Exhibit IV thereto).

**PepsiCo 8.** A year later, Dr. Aaron Brody published an article about the use of microencapsulated flavor for aroma release from the opening of a package and the incorporation of aroma during a packaging manufacturing process (e.g., extrusion) to preserve or supplement flavor of products. See Ex. 11 (Aaron L. Brody, *Flavor, Flavor Everywhere - But in Packaging?*, 37 Cereal Foods World 834, 834-35 (1992)).

**ST Response 8.** Admitted in part and denied in part. ST admits that Dr. Aaron Brody published “Flavor, Flavor Everywhere - But in Packaging?” in Volume 37 of Cereal Foods World at pages 834-35 in 1992. ST denies that Brody’s article disclosed commercially feasible methods, systems, and formulas for producing aromatic packaging. The Brody article, which is fewer than 900 words in total, makes no such disclosures. (Ex. 11). Dr. Hotchkiss does not claim this either. (Ex. 2 at 12).

**PepsiCo 9.** As a further example, Hebrew University researchers filed an international patent application published in 2004 directed to a method by which “aroma fractions are entrapped, encapsulated impregnated or embedded and protected from chemical degradation” and attached to a product package surface (*e.g.*, coffee) to release the aroma upon opening, or in a constant, but controlled manner. *See* Ex. 12 (WO2004034819, page 4, lines 13-22).

**ST Response 9.** Admitted in part and denied in part. ST admits that researchers at Hebrew University applied for a foreign patent in 2004 directed to a method by which “aroma fractions are entrapped, encapsulated impregnated or embedded and protected from chemical degradation.” ST denies that the WO2004034819 application disclosed commercially feasible methods, systems, and formulas for producing aromatic packaging. (Cadwallader Decl. Exhibit IV thereto).

**PepsiCo 10.** Despite industry and academic research in the area, aroma release packaging has achieved little commercial success in the food and beverage industry for a combination of reasons, including concerns regarding cost, regulations, deceptive marketing, and consumer preference. *See, e.g.*, Ex. 2 (¶¶ 60-61, 99-115, 155-168); Ex. 6 (at 126-27); Ex. 13 (PEP0096046-052 at 050-51); Ex. 14 (Edelstein Exh. 32); Ex. 15 (Chadwick Exh. 9).

**ST Response 10.** Admitted in part and denied in part. ST admits that producing commercially successful aromatic packaging has been challenging for the consumer products industry, including PepsiCo. Yet PepsiCo’s researchers have continued to attempt to commercialize aromatic packaging and even contacted ST after this case was filed seeking ST’s assistance in those efforts. (Ex. 243, ST-008902). ST denies that the reasons industry and

academia have failed to achieve commercial success relate to cost, regulations, deceptive marketing, or consumer preference. Each and every one of these objections have been raised with ST in the past but ST has demonstrated time and again, including to PepsiCo, that its technology yields results that are cost effective, compliant with regulations, not deceptive to consumers, and preferred by consumers. (ST's Rule 56.1 Statement ("ST's SOF") # 5 through 20 and authorities cited therein).

## II. PEPSICO'S WORK ON AROMA RELEASE PACKAGING

### A. PepsiCo Research in the 1990s: Initial Research in Aroma Release Packaging and its Potential Effects on Consumer Experience.

**PepsiCo 11.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 11.** Admitted in part and denied in part. ST admits that on Dec. 17, 1997 a patent application entitled "Aroma Release Bottle and Cap" that eventually issued as U.S. Patent No. 6,102,224 (the "224 Patent") on Aug. 15, 2000 was filed with most of the named inventors being IDEO employees. (Ex. 27). [REDACTED]

[REDACTED] The report relied upon by PepsiCo as source material for the invention was prepared by Sun and Quintus-Bosz of IDEO. (Ex. 20). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ST denies that the

‘224 Patent, by itself, could [REDACTED]

[REDACTED] and no evidence of this exists within the documents cited by PepsiCo. The fact that the ‘224 Patent does not even mention affecting taste with aroma, and was never commercialized by PepsiCo is a strong indication otherwise.

**PepsiCo 12.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 12.** ST admits that IDEO, as Pepsi’s request, conducted limited development of a bottle tamper band and cap that led to the filing of the ‘224 Patent with Given and Morrison listed as co-inventors. ST admits that Exhibit 21 refers [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ex. 21, PEP0090192). ST denies that PepsiCo

ever actually successfully achieved its research goals to “[REDACTED]” of

products or “[REDACTED]” as evidenced by the fact

that none of the documents cited by PepsiCo confirm that those goals were actually achieved, but rather that these were merely desired goals. (Ex. 20, PEP 0090190; Ex. 21, PEP0089323).



**PepsiCo 13.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 13.** ST admits that the documents relied upon by PepsiCo indicate that IDEO, at PepsiCo's request, conducted limited development of a bottle with encapsulates applied on the neck with a tamper band over them. ST denies that IDEO's bottle successfully resulted in the active release of aromas since PepsiCo performed no scientifically based consumer testing of the invention. (See ST's Response to PepsiCo's SOF 14 below).

**PepsiCo 14.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 14.** Admitted in part and denied in part. ST admits that the documents relied upon by PepsiCo indicate that in [REDACTED] [REDACTED]. ST denies that the documents support PepsiCo's characterization of these as "[REDACTED] [REDACTED]." The documents do not specify how aroma was released or what "[REDACTED] [REDACTED]" was used. In fact, it is unclear how aroma was added. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 15.** [REDACTED]

[REDACTED]

[REDACTED]

**ST Response 15.** Admitted in part and denied in part. ST admits that the PepsiCo pursued patent protection for the technology described in the ‘224 Patent issued to PepsiCo. ST denies that the ‘224 Patent alone provides sensory benefits. It does not and none of the documents cited by PepsiCo support this conclusion. (Ex. 21; Ex. 24).

**PepsiCo 16.** On December 17, 1997, PepsiCo filed a non-provisional patent application (listing, among others from PepsiCo and IDEO, Morrison and Given as inventors), which eventually issued (and published) on August 15, 2000 as U.S. Patent No. 6,102,224 to Sun *et al.* Ex. 27 (PEP0097316-328).

**ST Response 16.** Admitted.

**PepsiCo 17.** Despite the success of obtaining a patent directed to “systems for releasing a flavor enhancing aroma or scent when a beverage bottle is opened,”

[REDACTED]

[REDACTED]

**ST Response 17.** Admitted in part and denied in part. Admitted that [REDACTED]

[REDACTED] Denied that obtaining the ‘224 Patent can be considered a success in view of Pepsico’s stated goal of commercializing aroma release technology and its resulting failure to achieve that goal. Ex. 27 (at 323); Ex. 17 (59:1-59:8).

**B. PepsiCo Research in the 2000s: Sensory and Aroma-Taste Interaction Research.**

**PepsiCo 18.**

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 18.* Admitted in part and denied in part. Admitted that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ex. 86, Covarrubias Tr. at 86:7-18). Furthermore, the term [REDACTED] describes the size, and not the focus, of the efforts, since a [REDACTED]” is a big opportunity for PepsiCo and a big program that includes many projects. (Ex. 85, Havekotte Tr. 90:5-8; Ex. 87, Zhang Tr. 35:2-15).

**PepsiCo 19.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 19.* Denied. Denied that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Denied that the [REDACTED]

[REDACTED]

[REDACTED] (Ex. 85, Havekotte Tr. 43:9 to

45:11). Denied that the [REDACTED]

[REDACTED]

[REDACTED] (Ex. 86, Covarrubias Tr. 28:20 to 29:14 and 65:5-17).

**PepsiCo 20.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 20.*

Denied.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

[REDACTED]

[REDACTED]. (Ex. 35, PEP0097764-767; Ex. 33, PEP0097886-887). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 21.** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 21.* Denied. No documentary evidence produced by PepsiCo supports the claim that on or before January 2008, Havekotte and Covarrubias had independently discovered methods or systems to apply aromas to containers to alter the flavor experience. The email from Havekotte dated January 29, 2008 attached as Exhibit 29 to PepsiCo's motion provides no evidence to support Havekotte's conclusory assertions of PepsiCo's alleged achievements. No other documents produced by PepsiCo support Havekotte's claims in Exhibit 29. (Declaration of Claire Koelsch Sand ("Sand Decl.") at pg. 3, 13-14).

**PepsiCo 22.** [REDACTED]

[REDACTED]

*ST Response 22.* Denied. No documentary evidence produced by PepsiCo supports the assertion that studies performed by PepsiCo or directed by PepsiCo on or before January 2008 demonstrated that [REDACTED].” The documents attached as Ex. 37 (PEP0038462-480) and Ex. 38 (PEP0012168-204 at 203) both post-date the January 2008 date by as much as a year. The document attached as Ex. 33 does not provide any evidence that PepsiCo discovered methods or systems to apply aromas to containers to alter the flavor experience. (Sand Decl. at pg. 13).

**PepsiCo 23.** [REDACTED]

*ST Response 23.* Denied. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The earliest reference to Covarrubias’ work on aroma release is contained in Covarrubias’ January 28, 2008 laboratory notebook entry on this topic. (Ex. 34, PEP0090481). [REDACTED]

[REDACTED]

[REDACTED] “CLT test” refers to a central location test performed by Covarrubias

using consumers as test subjects. (Ex. 86, Covarrubias Tr. at 61:6 to 63:23). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The “CLT test” was not a test of “aroma release packaging technology.” The test showed a lack of sophistication among Pepsi scientists with regard to aroma packaging. (Sand Decl. at pg. 13). Pepsi’s support for its assertion of this fact does not provide support at all. The analysis performed by Dr. Hotchkiss that PepsiCo relies upon starts with efforts beginning in May of 2008 (Ex. 2, Exh. D at 9), over six months after the claimed “CLT test,” and over four months after Covarrubias first entered information about his supposed invention in his lab notebook. (Sand Decl. at pg. 13).

**PepsiCo 24.** [REDACTED]

[REDACTED]

[REDACTED]

***ST Response 24.*** Denied. [REDACTED]

[REDACTED]

[REDACTED]. Quantitative research is the systematic empirical investigation of observable phenomena via statistical, mathematical or computational techniques. [https://en.wikipedia.org/wiki/Quantitative\\_research](https://en.wikipedia.org/wiki/Quantitative_research) (visited March 17, 2017). Quantitative research produces data in numerical form. Sensory studies are qualitative research producing data in words, e.g. a consumer’s preference for an aroma. Qualitative research asks broad questions and collects word data from phenomena or participants. [https://en.wikipedia.org/wiki/Quantitative\\_research](https://en.wikipedia.org/wiki/Quantitative_research) (visited March 17, 2017). Qualitative methods examine the why and how of decision making and produce information only on the

particular cases studied. [https://en.wikipedia.org/wiki/Qualitative\\_research](https://en.wikipedia.org/wiki/Qualitative_research) (visited March 17, 2017). The CLT test was a qualitative study, and it failed. (Sand Decl. at pg. 13).

**PepsiCo 25.** [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

**ST Response 25.** Admitted in part and denied in part. Admitted that [REDACTED]

[REDACTED]  
[REDACTED]

(Ex. 43, PEP0101967-978; Ex. 44, PEP0099453-458). Denied that [REDACTED]

[REDACTED]

[REDACTED] (ST Response to PepsiCo  
SOF 23).

**PepsiCo 26.** [REDACTED]

[REDACTED]  
[REDACTED]

**ST Response 26.** Denied. This was not a quantitative consumer test. (ST Response to PepsiCo SOF 24). PepsiCo cites an internal PepsiCo presentation, but PepsiCo did not perform the test, Sofos did, and Sofos' findings do not support PepsiCo's statements in its presentation. (Ex. 43, PEP0101967-978; Ex. 44, PEP0099453-458). [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 27.** As it had done earlier, PepsiCo also pursued patent protection for this updated aroma release packaging technology and its associated sensory benefits. Ex. 45 (PEP0101359- 360).

***ST Response 27.*** Denied. Denied that “Disclosure #477” attached as Exhibit 45 to PepsiCo’s motion discloses PepsiCo’s “updated aroma release packaging technology.” Rather, “Disclosure #477” discloses ST’s trade secrets that were revealed to PepsiCo on a confidential basis. (Sand Decl. at pg. 11-18).

**PepsiCo 28.** On September 3, 2008, PepsiCo filed a provisional patent application (listing Covarrubias and Havekotte as inventors) directed to the additional work performed in 2007 and 2008. *See* Ex. 46 (U.S. Prov. Appl’n No. 61/093,769).

**ST Response 28.** Admitted in part and denied in part. Admitted that PepsiCo filed a provisional patent application listing Covarrubias and Havekotte as inventors. Denied that the provisional application attached as Exhibit 46 to PepsiCo's motion discloses PepsiCo's "updated aroma release packaging technology" or additional work on that technology performed in 2007 and 2008 by PepsiCo employees. (Sand Decl. at pg. 11-18). The provisional application attached as Exhibit 46 discloses ST's trade secrets that were revealed to PepsiCo on a confidential basis. (Sand Decl. at pg. 11-18).

**PepsiCo 29.** Nearly a year later, on August 27, 2009, PepsiCo filed a non-provisional patent application (listing Covarrubias and Havekotte as inventors) claiming priority to the provisional application and adding subject matter directed to the further sensory study work performed during the previous year as described above. *See* Ex. 47 (U.S. Appl'n No. 12/548,549).

**ST Response 29.** Admitted in part and denied in part. Admitted that PepsiCo filed the non-provisional application attached as Exhibit 47 to PepsiCo's motion that claims priority from the provisional application attached as Exhibit 46. Denied that the non-provisional application added "subject matter directed to the further sensory study work performed during the previous year" by PepsiCo. The non-provisional application attached as Exhibit 47 discloses ST's trade secrets that were revealed to PepsiCo on a confidential basis. (Sand Decl. at pg. 11-18).

**PepsiCo 30.** This patent application published on March 4, 2010 as US2010/0055245A1 to Covarrubias *et al.* ("Covarrubias" Patent Application), *see* Ex. 48 (PEP0097098-102); ST alleges that this application misappropriates its combination trade secrets. *See, e.g.,* Ex. 1 (¶ 122).

**ST Response 30.** Admitted in part and denied in part. ST alleges that this application misappropriates its compilation trade secrets. (ST Mem. at 1, 3, 16-17). Otherwise, admitted.

**C. PepsiCo Research in the 2000s: Delivery Systems Research.**

**PepsiCo 31.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 31.** Admitted in part and denied in part. Admitted that a [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 32.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 32.** Admitted in part and denied in part. Admitted that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. None of the exhibits cited by PepsiCo support these claims.

**PepsiCo 33.** [REDACTED]

[REDACTED]

**ST Response 33.** Denied. The exhibit cited by PepsiCo does not support this factual assertion. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] was a part of ST's compilation trade secrets disclosed on a confidential basis to PepsiCo employees prior to Zhang's PowerPoint presentation. (Landau Decl. at pg. 22-23; Sand Decl. at pg. 11-19).

**PepsiCo 34.** On July 7, 2010, PepsiCo filed a non-provisional patent application (listing Zhang and Given as inventors) directed to the additional work performed in

2009 and 2010 on aroma release technology, especially with respect to multi-layer film technology. Ex. 57 (PEP0097664-666); Ex. 58 (U.S. Appl'n No. 12/831,683).

**ST Response 34.** Admitted in part and denied in part. Admitted that PepsiCo filed a non-provisional patent application listing Zhang and Given as inventors. Denied that the application was “directed to the additional work performed in 2009 and 2010 on aroma release technology, especially with respect to multi-layer film technology.” The non-provisional application and Disclosure #692 disclose ST’s trade secrets that were revealed to PepsiCo on a confidential basis. (Sand Decl. at pg. 11-19).

**PepsiCo 35.** This patent application published on January 12, 2012 as US2012/0006909A1 to Zhang *et al.* (“Zhang ‘909”), and was issued on July 2, 2013 as U.S. Patent No. 8,474,637 to Zhang *et al.* See Ex. 59 (PEP0097114-121).

**ST Response 35.** Admitted.

**PepsiCo 36.** ST alleges that this patent also misappropriates its combination trade secrets. See, e.g., Ex. 1 (¶ 138).

**ST Response 36.** Denied. ST alleges this patent misappropriates its compilation trade secrets. (ST Mem. at 1, 3, 16-17).

**PepsiCo 37.** Additionally, on September 1, 2011, PepsiCo filed a non-provisional patent application (also listing Zhang and Given as inventors) directed to the additional work performed in 2009 and 2010 on aroma release technology, especially with respect to double coated gelatin capsule technology. Ex. 60 (PEP0097630-632); Ex. 61 (U.S. Appl'n No. 13/223,834).

**ST Response 37.** Admitted in part and denied in part. Admitted that PepsiCo filed a non-provisional patent application listing Zhang and Given as inventors. Denied that the

application was “directed to the additional work performed in 2009 and 2010 on aroma release technology, especially with respect to double coated gelatin capsule technology.” The non-provisional application and Disclosure #843 disclose ST’s trade secrets that were revealed to PepsiCo on a confidential basis. (Sand Decl. at pg. 11-19).

**PepsiCo 38.** This patent application published on March 7, 2013 as US2013/0056551A1 to Zhang *et al.* (“Zhang ‘551’”). *See* Ex. 62 (PEP0097122-131). ST alleges that this patent application misappropriates its combination trade secrets as well. *See, e.g.*, Ex. 1 (¶ 144).

**ST Response 38.** Admitted in part and denied in part. The details regarding publication are admitted. ST alleges this patent misappropriates its compilation trade secrets. (ST Mem. at 1, 3, 16-17).

#### **D. Commercialization of PepsiCo’s Aroma Release Packaging Research.**

**PepsiCo 39.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 39.** Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

██████████ That demand existed as demonstrated by PepsiCo's entry into four mutual non-disclosure agreements with ST, one development agreement with ST, and 70 different communications with ST regarding ST's aroma technology. (ST Mem. at 1, 5-10). Even after this case was filed PepsiCo researchers contacted ST seeking its assistance in efforts to develop aromatic packaging and those efforts are ongoing. (Ex. 243, ST-008902). PepsiCo's failure to commercialize were not attributable to costs or lack of consumer demand, but rather PepsiCo's failure to develop and implement commercially feasible methods, systems, and formulas for aromatic packaging. (ST Mem. at 1, 10-12).

### III. ST'S WORK ON AROMA RELEASE PACKAGING

**PepsiCo 40.** Smaller startup companies were also interested in aroma release packaging; for example, ScentSational Products, Inc. (the predecessor entity to ScentSational Technologies, LLC ("ST")), was founded in 1997 by Steven Landau ("Landau"). *See, e.g.*, Ex.1 (¶¶ 22-23).

**ST Response 40.** Admitted.

**PepsiCo 41.** ST was co-formed by Landau and Barry Edelstein ("Edelstein") in 2002. *See, e.g.*, Ex. 1 (¶¶ 22-23).

**ST Response 41.** Admitted that ST was formed in 2002 in order to continue the work of the predecessor entity referred in in PepsiCo SOF # 40 above.

**PepsiCo 42.** As Landau explained, his idea for ST was based on his experience during a ski trip where he used cherry ChapStick, tasted water, and then perceived that the water tasted like cherry. Ex. 63 (Landau Dep., 7/21/15, 22:3-22:4, 22:13-23:3).

**ST Response 42.** Admitted in part and denied in part. Landau testified that he purchased cherry ChapStick and a bottle of water on a ski trip. (Ex.63, Landau Dep. 7/21/15 at 22:3-23:3). After putting on the ChapStick, he drank the water and experienced the sensation of cherry-flavored water. (*Id.*) He tasted the ChapStick and it had no flavor. (*Id.*) Thus, he realized that the taste he perceived came from the aroma of the ChapStick. (*Id.*) After this realization, Landau began a long quest to establish a method to deliver scents in packaging by creating scented plastics to alter a consumer's flavor taste experience. (*Id.*)

**PepsiCo 43.** Landau, who had been working in the travel and hospitality industries with a focus on advertising, marketing, and sales, became (and remains) the Chief Technology Officer ("CTO") and Chief Marketing Officer ("CMO") of ST—despite no formal scientific training. Ex. 63 (9:3-18:21, 36:25-37:8, 50:4-50:6).

**ST Response 43.** Admitted.

**PepsiCo 44.** As CTO and CMO, Landau focused on "the technology side" and "creating opportunities with clients and presenting." Ex. 64 (Edelstein Dep., 1/5/16, 24:19-25:19).

**ST Response 44.** Admitted.

**PepsiCo 45.** Edelstein, who had previously worked in sales, marketing, and legal roles, became (and remains) the President and Chief Executive Officer ("CEO") of ST. Ex. 64 (14:6- 24:2).

**ST Response 45.** Admitted.

**PepsiCo 46.** As President and CEO, Edelstein focused on "the business side" and specifically, the "strategy, the corporate, the finance, capital raise[, and] to the extent that we did, legal." Ex. 64 (24:19-25:19).



**ST Response 46.** Admitted.

**PepsiCo 47.** [REDACTED]

[REDACTED]

**ST Response 47.** Admitted in part and denied in part. While it is true that ST did not own a manufacturing plant, ST had access to these facilities through its vendors and strategic partners. In this way, ST had significant capabilities for manufacturing and research. ST produced and sold many master batch additives not just one. “Master batches are one of the products we sell and each one varies based on the polymers and flavors or fragrances used. ST sold flavors created by flavor suppliers according to ST’s manufacturing guidelines. ST sold microencapsulates made by our encapsulate suppliers per our specifications using flavors and fragrances from our flavor suppliers and shipped directly to manufacturing facilities on our behalf.” (Landau Decl. at pg. 1-2).

**PepsiCo 48.** [REDACTED]

[REDACTED]

**ST Response 48.** Denied. ST had a laboratory in its offices. Mr. Landau answered “no” when asked “...you didn't have a lab, correct?” because ST did have a lab in his office that he used to blend flavors he received from ST’s suppliers. (Ex. 63, Landau Tr. at 64). ST also had access to facilities at Penn State that it used when ST’s facilities were inadequate for the job. (Landau Decl. at pg. 1-2).

**PepsiCo 49.** [REDACTED]

***ST Response 49.***

Denied. [REDACTED]

**PepsiCo 50.** [REDACTED]

***ST Response 50.***

Admitted in part and denied in part. Admitted that Mr. Landau's

testimony is quoted accurately. Denied that the lack of a laboratory notebook demonstrates ST

lacks trade secrets. (ST Response to PepsiCo SOF 49).

**PepsiCo 51.**

Although no primary or formal documentation exists

regarding ST's research and development processes, ST filed numerous published patent

applications, issued press releases, and was quoted and discussed in publicly-available press

releases, articles, and trade reports about its claimed technology. *See, e.g.*, Ex. 66

(US2007/0262165A1); Ex. 1 (¶¶ 33-34).

**ST Response 51.** Admitted in part and denied in part. ST documented its research and development by retaining samples, filing patent applications, and preparing documents for ST projects. These records document that ST was engaged in research and development. (ST Response to PepsiCo SOF 49). ST also documented its research and development by performing consumer studies and other testing at Penn State, conducting testing with its strategic partner flavor houses, preparing its flavor formulation guidelines and its manufacturing guidelines, performing tests with Pliant as part of a government grant, and other activities. (Landau Decl. at pg. 2-3). While ST issued press releases and gave interviews regarding its technology, it never publically disclosed its compilation trade secrets in the media. (Landau Decl. at pg. 2-3). While ST issued press releases and gave interviews regarding its technology, it never publically disclosed its compilation trade secrets in the media. (ST's SOF # 3-20; Cadwallader Decl. pg. 10-14 and Exhibit IV).

**PepsiCo 52.** For example, with respect to its claimed "Consumer Study" trade secret of [REDACTED] Landau was quoted in an article that "[w]e have experienced similar results in consumer studies we have conducted which revealed that consumers experience a sweet taste when exposed to a sweet aroma." Ex. 68 (PEP0096200-203 at 201).

**ST Response 52.** Admitted in part and denied in part. Admitted that PepsiCo has accurately reproduced Landau's quote in Ex. 68 (PEP0096200-203 at 201). Denied that the quote discloses ST's trade secrets. (ST's SOF # 3-20; Cadwallader Decl. at pg. 10 and Exhibit IV).

**PepsiCo 53.** Moreover, as to its claimed "Orange Juice" trade secret of [REDACTED]

[REDACTED] US2007/0262165A1 describes a process by which: “[p]lastic/scented material can be added in other manners. For example, the plastic/scented material can be added to plastic as a direct liquid feed or as dry scented materials.” Ex. 66 (¶¶ [0027]-[0028]).

**ST Response 53.** Admitted in part and denied in part. Admitted that PepsiCo has accurately quoted from US2007/0262165A1 attached as Ex. 66 (¶¶ [0027]-[0028]). Denied that the quotes disclose ST’s trade secrets. (ST’s SOF # 3-20; Cadwallader Decl. at pg. 10-11 and Exhibit IV).

**PepsiCo 54.** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 54.** Admitted in part and denied in part. Admitted that at one time or another over the course of almost twenty years in business, ST has signed non-disclosure agreements with many companies who have sought ST’s expertise in aromatic packaging. Denied that the exhibits relied upon by PepsiCo reflect [REDACTED] [REDACTED]. None of the exhibits cited by PepsiCo refer to [REDACTED] (Ex. 69, ST-014174-179; Ex. 70, Edelstein Dep. Exh. 33).

**PepsiCo 55.** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 55.** Admitted in part and denied in part. Admitted that PepsiCo has accurately quoted portions of Landau's testimony. Denied that [REDACTED]

[REDACTED] PepsiCo has offered no evidence of what is required for commercialization of ST's technology, but ST has offered such evidence and ST's evidence demonstrates that its technology was commercially viable. (Sand Rep. at pg. 27-33 (*see* Exh. 271 to Garner Decl.))

**PepsiCo 56.** [REDACTED]

[REDACTED]

[REDACTED]

**ST Response 56.** Admitted in part and denied in part. Admitted that PepsiCo has accurately quoted a portion of Landau's testimony. Denied that [REDACTED]

[REDACTED]

PepsiCo has offered no evidence of what is required for commercialization of ST's technology, but ST has offered such evidence and ST's evidence demonstrates that its technology was commercially viable. (Sand Rep. at pg. 27-33 (Ex. 271))

**PepsiCo 57.** [REDACTED]

[REDACTED]

[REDACTED]

***ST Response 57.*** Denied. ST had a lab in Landau's office. (Landau Decl. at pg. 1-2). ST had access to facilities at Penn State that Landau used when ST's were inadequate for the task. (*Id.*) ST had strategic partnership agreements with numerous companies who provided ST with access to their laboratory and manufacturing facilities. (*Id.*) [REDACTED]

[REDACTED] (ST SOF # 3-20).

**PepsiCo 58.** [REDACTED]

[REDACTED]

***ST Response 58.*** Admitted in part and denied in part. [REDACTED]

[REDACTED]

[REDACTED] The citation by PepsiCo does not support these assertions. (Ex. 67, Landau Dep., 12/18/15, 254:4-256:15).

**PepsiCo 59.** [REDACTED]

[REDACTED]  
[REDACTED]

**ST Response 59.** Denied. ST commercialized Aroma Water, a bottled water product [REDACTED] (Ex. 64, Edelstein Tr. at 216-219; Ex. 141, Landau Tr. Vol 4 7/29/2015 at 1181). ST commercialized the NutriSystem sports bottle [REDACTED] [REDACTED] (Ex. 141, Landau Tr. Vol 4 7/29/2015 at 1136). ST commercialized the “Right Cup” a plastic drinking cup made [REDACTED] that raised over \$1M on IndieGogo.com. (Ex. 67, Landau Dep. 12/18/15 at 268-9; Landau Dep. Ex. 87).

**PepsiCo 60.** [REDACTED]

[REDACTED]

**ST Response 60.** Denied. Neither exhibit 14 nor 70 support this assertion as fact. Rather, it is a distortion of fact. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

**PepsiCo 61.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

***ST Response 61.*** Admitted in part and denied in part. Admitted that PepsiCo has accurately quoted certain statements in the “result/reason” column of Exhibit 14 (the same document as Exhibit 80). Denied that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Ex. 79, Landau Dep. 7/28/2015 at 912-915).

**IV. THE ST-PEPSICO “RELATIONSHIP”: ST MARKETS TO MULTIPLE PEPSICO DIVISIONS, BUT NO SIGNIFICANT REVENUE RESULTS**

**PepsiCo 62.**

[REDACTED]

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

***ST Response 62.*** Admitted in part and denied in part. Admitted that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Denied that ST was unable to develop a business relationship with PepsiCo. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. All provide evidence that ST and PepsiCo were parties to a significant business relationship.

**PepsiCo 63.** [REDACTED]

[REDACTED]

[REDACTED]

***ST Response 63.*** Admitted in part and denied in part. Admitted that the revenue figure provided is accurate. Denied that [REDACTED]

[REDACTED]

[REDACTED]. (Ex. 64, Edelstein Tr. 1/5/2016 at 210-211).

**PepsiCo 64.**

[REDACTED]

[REDACTED]

[REDACTED]

***ST Response 64.*** Admitted in part and denied in part. Admitted that [REDACTED]

[REDACTED] (Dkt. 33-1, 33-

2, 33-3 and 33-4). Denied that [REDACTED]

[REDACTED]

[REDACTED] Ex. 70).

**PepsiCo 65.**

[REDACTED]

[REDACTED]

[REDACTED]

***ST Response 65.*** Admitted.

**PepsiCo 66.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**ST Response 66.** Admitted in part and denied in part. Landau may have had contact with Havekotte and Covarrubias. (ST Resp. to PepsiCo SOF 67). Landau had direct contact with Given. (Ex. 65, Landau Tr. 2/18/2016 at 224-226).

**PepsiCo 67.** [REDACTED]

**ST Response 67.** Denied. Landau testified that he “did a number of presentations at PepsiCo...very often I was in a room with a lot of people sitting around a table, and I didn't know who was there. I didn't know the names of each person.” (Ex. 65, Landau Tr. 2/18/2016 at 234-235).

**PepsiCo 68.** [REDACTED]

**ST Response 68.** Admitted in part and denied in part. Admitted that at deposition Havekotte, Covarrubias, Given, and Zhang mysteriously had no memory of ST. Denied. Even though they claimed to have never heard of ST, as evidenced by the many references to ST found in their files, including ST presentations, ST studies, and ST names, addresses, emails and telephone numbers listed in their rolodexes, that testimony is highly questionable. (ST SOF # 35-36, 46-47, 51-52, 76, 80, 84, 90-96).

## **V. THE ST-COCA-COLA RELATIONSHIP**

**PepsiCo 69.** [REDACTED]

*ST Response 69.* Admitted.

PepsiCo 70.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 70.* Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

PepsiCo 71.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 71.* Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 72.**

[REDACTED]

*ST Response 72.* Denied.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 73.**

[REDACTED]

[REDACTED]

*ST Response 73.* Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 74.**

[REDACTED]

[REDACTED]

*ST Response 74.* Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 75.**

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 75.*

Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 76.**

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 76.*

Denied.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 77.**

[REDACTED]

[REDACTED]

*ST Response 77.* Denied.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 78.**

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 78.* Denied.

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 79.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 79.* Denied.

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 80.**

*ST Response 80.*

Admitted in part and denied in part.

**PepsiCo 81.**

*ST Response 81.*

Denied.

**PepsiCo 82.**

*ST Response 82.*

Admitted in part and denied in part.

**PepsiCo 83.**



***ST Response 83.*** Admitted in part and denied in part. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

**PepsiCo 84.** [REDACTED]

[REDACTED]

***ST Response 84.*** Admitted in part and denied in part. [REDACTED]

[REDACTED]  
[REDACTED]

**PepsiCo 85.** [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

***ST Response 85.*** Admitted in part and denied in part. Admitted that PepsiCo 85 accurately quotes a portion of an email out of context. [REDACTED]

[REDACTED]  
[REDACTED]

**PepsiCo 86.**

*ST Response 86.* Admitted in part and denied in part.

**PepsiCo 87.**

*ST Response 87.* Denied. (ST's SOF # 101-127).

**PepsiCo 88.**

*ST Response 88.* Denied. (ST's SOF # 101-127).

**PepsiCo 89.**

*ST Response 89.* Admitted in part and denied in part.

**PepsiCo 90.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 90.* Admitted in part and denied in part.

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 91.**

[REDACTED]

[REDACTED]

*ST Response 91.* Denied.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**PepsiCo 92.**

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 92.* Denied. (ST's SOF # 122-128).

**PepsiCo 93.**

*ST Response 93.* Admitted.

**PepsiCo 94.**

*ST Response 94.* Admitted in part and denied in part.

**PepsiCo 95.**

*ST Response 95.* Admitted in part and denied in part.

**PepsiCo 96.**

[REDACTED]

[REDACTED]

[REDACTED]

*ST Response 96.* Admitted in part and denied in part. [REDACTED]

[REDACTED]

*PepsiCo 97.* [REDACTED]

[REDACTED]

[REDACTED]

*ST Response 97.* Admitted in part and denied in part. [REDACTED]

[REDACTED]

[REDACTED]

*PepsiCo 98.* [REDACTED]

[REDACTED]

*ST Response 98.* Admitted in part and denied in part. Admitted that the quotation is accurate. [REDACTED]

[REDACTED]

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